Global Policy for the Allocation of the remaining IPv4 Address Space

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Introduction

❑ This policy defines distribution of last pieces of IANA IPv4 address to RIRs

❑ It is a revised version of the proposals at APNIC24

  ➢ prop-046:IPv4 Coundown Policy
  ➢ prop-051: Global policy for the allocation of the remaining IPv4 address space

Background

- ❑ IPv4 address exhaustion is projected to take place in the next few years
  - ➤ IANA block :<u>April 2011 </u>(41 */8 in Feb 2008)
  - ➤ RIR block   :<u>July 2012</u>

- ❑ Reference
  - ➤ http://www.potaroo.net/tools/ipv4/

How to be prepared in Address Management Area

□ **Before IANA/RIR pool runs out**

➤ Minimize confusion on distribution of last pieces of IPv4 address

Both issues are important, but we'd <u>first</u> like to focus here !

□ **After IANA/RIR pool runs out**

➤ Minimize confusion on management of distributed IPv4 address

Current Problem

☐ No clear agreement on distribution of the last pieces of IPv4 address space

➢ No explicit decision made whether to continue with the current scheme or implement other forms of distribution for last pieces

☐ Difficult for RIRs to plan distribution of last IPv4 blocks in their respective regions

➢ IANA allocations of the last pieces depends on the timing of each RIR's request,i.e, remain uncertain until the last minute

➢ if RIRs wish to use some of their /8s for a special purpose, don't know how far to distribute it for LIR allocations

Measure to be Taken

☐ We should define distribution of last IANA blocks among RIRs to reduce the last minute confusion

Proposal

- IANA to reserve 5*/8 separate from the standard IANA allocation blocks to RIRs

- Continue allocations based on the current procedure until IANA's allocation blocks to RIRs hits zero
  - ➢ IANA should notify NRO when IANA pool will hit zero

- Proceed to allocate 1 */8 to each RIR from the reserved block
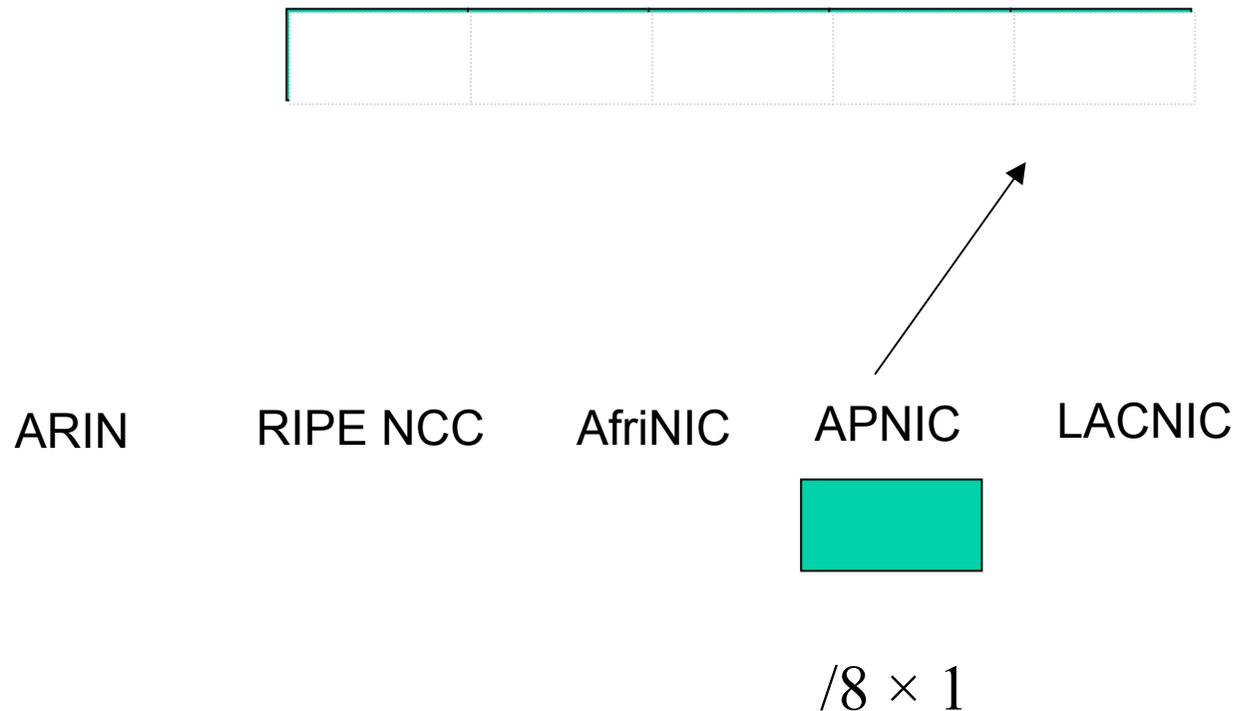 - ➢ RIR that made the last request in state2 will equally receive 1*/8 as other RIRs

Applying no policy change: Case 1

APNIC requests for 2 */8 and receives an allocation as requested

ARIN   RIPE NCC   AfriNIC   APNIC   LACNIC

/8 × 2
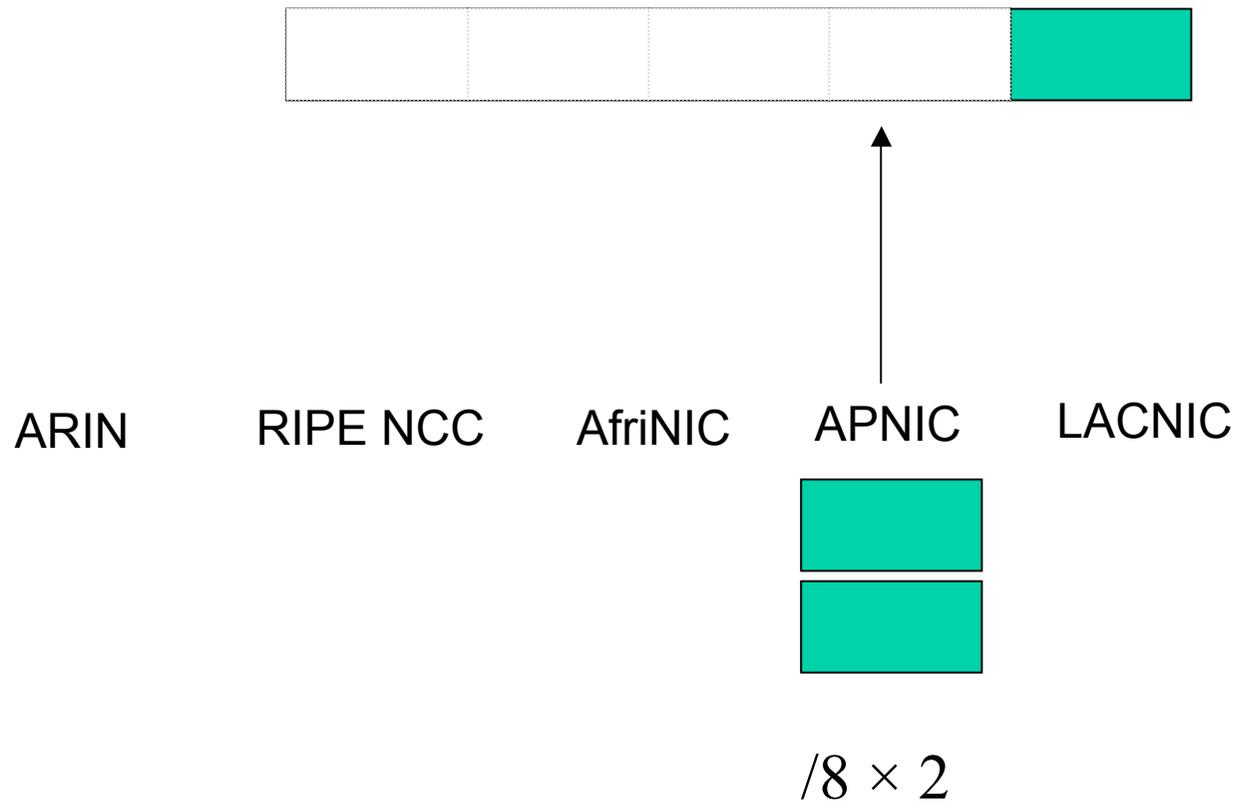
Applying no policy change: Case 2

APNIC requests for 2 */8 and receives a part of the requested allocation

ARIN   RIPE NCC   AfriNIC   APNIC   LACNIC

/8 × 1

Applying no policy change: Case 3

APNIC requests for 2 */8 but cannot receive an allocation as requested
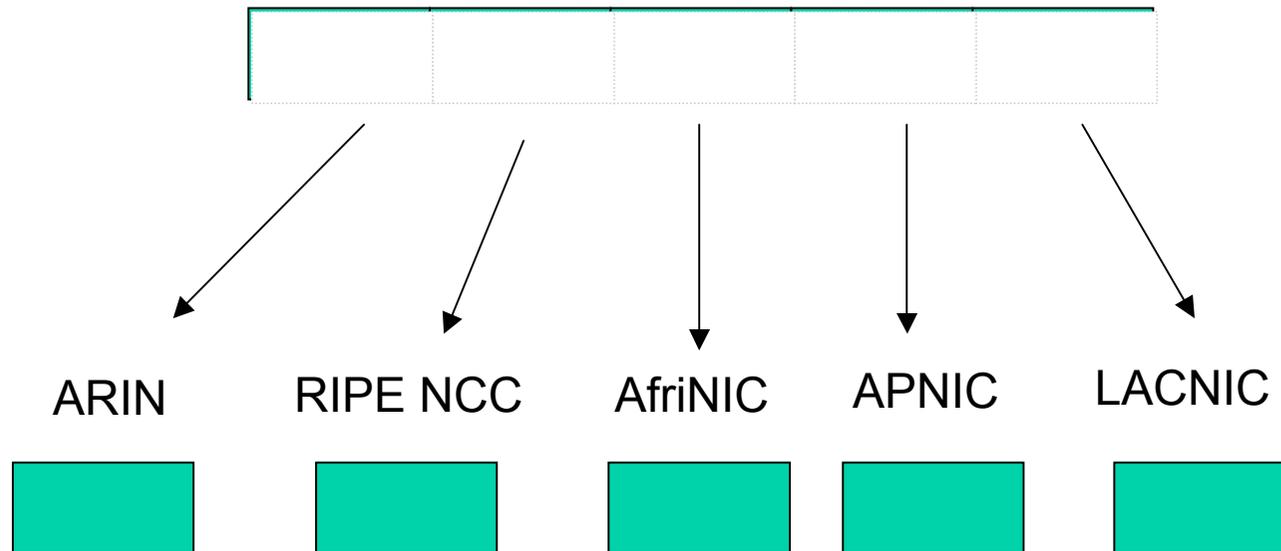

ARIN　　　RIPE NCC　　AfriNIC　　APNIC　　LACNIC

No blocks

Applying no policy change:
Effect on APNIC community in general

☐ Size of remaining pool can vary from 0 to <2 */8

☐ More difficult for the communities to know what
to expect if remaining RIR pool remains
uncertain until the last minute

Applying this proposal

Each RIR will receive 1 */8 each

ARIN   RIPE NCC   AfriNIC   APNIC   LACNIC

Applying this proposal

☐ Each RIR will know the size of IANA pool they can expect to receive at the end

☐ Help address planning of the remaining last blocks for each RIR region

Impact on address planning for RIRs

Applying No Policy
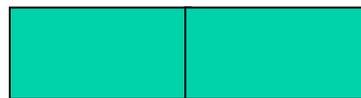
RIR's current free pool

RIR's additional free pool

$+$

+ 0*/8?

+ 1*/8?

+ 2*/8?

size x

Applying This Policy

RIR's current free pool

RIR's additional free pool

$+$

size x

Q&A